

In The Claims:

Please cancel claims 1-46.

Please add the following new claims:

47. (New) A filling system for the delivery of a liquid anesthetic agent from an anesthetic bottle to an internal sump of an anesthetic vaporizer, the system comprising:

a bottle adapter configured for attachment to the anesthetic bottle, the bottle adapter having an outlet opening through which anesthetic agent from the anesthetic bottle can be discharged;

an adapter valve assembly positioned in the bottle adapter and movable between an open position and a closed position, the adapter valve assembly including a valve head that prevents the flow of the anesthetic agent through the outlet opening when the adapter valve assembly is in the closed position;

a filling station positioned on the anesthetic vaporizer for receiving the bottle adapter and through which the anesthetic agent can flow into the internal sump of the anesthetic vaporizer; and

a filler valve assembly positioned in the filling station and movable between an open position and a closed position, the filler valve assembly being configured to contact the valve head of the adapter valve assembly and move the adapter valve assembly to the open position as the bottle adapter is inserted into the filling station, the filler valve assembly having a valve body movable within the filling station, the valve body being biased into a closed position to prevent the flow of anesthetic agent into the vaporizer, wherein the valve body is movable to the open position prior to movement of the adapter assembly to the open position.

48. (New) The filling system of claim 47 wherein the adapter valve assembly and the filler valve assembly are positioned such that the filling valve assembly opens prior to the opening of the adapter valve assembly as the bottle adapter is inserted

into the filling station.

49. (New) The filling system of claim 47 wherein the filling station includes a cylindrical open interior defined by an inner wall and the bottle adapter includes a sealing ring formed along its outer surface, wherein the sealing ring contacts the inner wall of the filling station to form a gas-tight seal with the inner wall as the bottle adapter is inserted into the filling station.

50. (New) The filling system of claim 49 wherein the sealing ring contacts the inner wall of the filling station prior to the bottle adapter opening the filler valve assembly to prevent the release of vapor pressure from the anesthetic vaporizer when the filler valve assembly opens.

51. (New) The filling system of claim 47 further comprising:
a cylindrical keyed section formed on the bottle adapter having at least a pair of protruding indexing ridges positioned at a first angle relative to each other around the outer circumference of the keyed section; and
a filler spout formed on the filling station, the filler spout having a cylindrical outer wall including at least a pair of recessed indexing grooves positioned at a second angle relative to each other, wherein the indexing grooves receive the indexing ridges and allow the bottle adapter to be inserted into the filling station only when the first angle is equal to the second angle.

52. (New) The filling system of claim 51 wherein the first angle between the indexing ridges and the second angle between the indexing grooves are determined by the type of anesthetic agent such that the filler spout can receive only one type of anesthetic agent.

53. (New) The filling system of claim 52 wherein the indexing grooves of the filler spout contact and receive the indexing ridges of the keyed section prior to the filler valve assembly opening as the bottle adapter is inserted into the filling station.

54. (New) The filling system of claim 51 wherein the filling station includes a cylindrical open interior defined by an inner wall and the bottle adapter includes a sealing ring formed along its outer surface, wherein the sealing ring contacts the inner wall of the filling station to form a gas-tight seal with the inner wall as the bottle adapter is inserted into the filling station.

55. (New) The filling system of claim 51 wherein the filler spout includes a front universal, prominent indexing groove and an agent-specific indexing groove, the width of the front indexing groove being greater than the width of the agent-specific indexing groove.

56. (New) The filling system of claim 51 wherein the keyed section includes a front universal, prominent indexing ridge and an agent-specific indexing ridge, the width of the front indexing ridge being greater than the width of the agent-specific indexing ridge.

57. (New) A filling system for the delivery of a liquid anesthetic agent from an anesthetic bottle to an anesthetic vaporizer, the system comprising:

a bottle adapter configured for attachment to the anesthetic bottle, the bottle adapter having an outlet opening through which anesthetic agent from the anesthetic bottle can be discharged;

an adapter valve assembly positioned in the bottle adapter and movable between an open position and a closed position, wherein anesthetic agent can flow through the outlet opening when the adapter valve assembly is in the open position;

a cylindrical keyed section formed on the bottle adapter, the keyed section having at least a pair of protruding indexing ridges positioned at a first angle relative to each other around the outer circumference of the keyed section;

a filling station positioned on the vaporizer for receiving the bottle adapter and through which the anesthetic agent can be dispensed into an internal sump of the anesthetic vaporizer;

a filler valve assembly positioned in the filling station and movable between an open position and a closed position, the filler valve assembly being movable to the open position after the bottle adapter is inserted into the filling station; and

a filler spout formed on the filling station, the filler spout having a cylindrical outer wall including at least a pair of recessed indexing grooves positioned at a second angle relative to each other, wherein the indexing grooves receive the indexing ridges as the bottle adapter is inserted into the filling station when the first angle is equal to the second angle.

58. (New) The filling system of claim 57 wherein the first angle between the indexing ridges is based on the type of anesthetic agent in the anesthetic bottle to which the bottle adapter is attached and the second angle between the indexing grooves is determined by the type of anesthetic agent to be received in the anesthetic vaporizer such that the filler spout can receive only one type of anesthetic agent.

59. (New) The filling system of claim 58 wherein the indexing grooves of the filler spout receive the indexing ridges of the keyed section prior to opening of the filler valve assembly and the adapter valve assembly as the bottle adapter is inserted into the filling station.

60. (New) The filling system of claim 57 wherein each of the indexing grooves is recessed into the outer wall of the filler spout and is defined by a top edge, the

top edge of each indexing groove being positioned beneath a top edge of the outer wall defining the filler spout.

61. (New) The filling system of claim 57 wherein the keyed section includes a front indexing ridge and an agent-specific indexing ridge, wherein the width of the front indexing ridge is greater than the width of the agent-specific indexing ridge.

62. (New) The filling system of claim 57 wherein the filling station includes a cylindrical open interior defined by an inner wall, the bottle adapter including a sealing ring that contacts the inner wall of the filling station to form a gas-tight seal as the bottle adapter is inserted onto the filling station.

63. (New) The filling system of claim 62 wherein the indexing grooves of the filler spout contact and receive the indexing ridges of the keyed section prior to the sealing ring contacting the inner wall of the filling station as the bottle adapter is inserted into the filling station

64. (New) The filling system of claim 62 wherein the sealing ring contacts the inner wall of the filling station prior to the bottle adapter opening the filler valve assembly.